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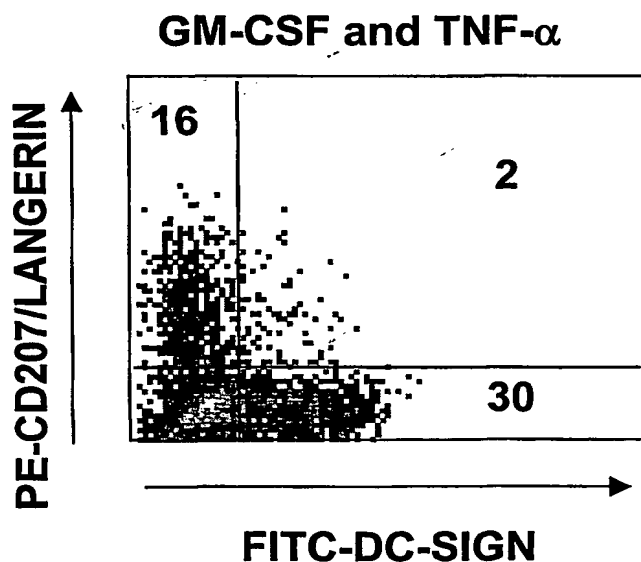
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(54) Title: RAPID ONE-STEP METHOD FOR GENERATION OF ANTIGEN LOADED DENDRITIC CELL VACCINE FROM PRECURSORS



(57) Abstract: A one-step method for producing antigen loaded antigen-presenting cells from monocytes ex vivo has been found which comprises contacting the monocytes with a composition comprising an activator such as TNF alpha preferably in combination with at least one growth factor such as GM-CSF and at least one soluble or particulate antigen. According to the methods of the present invention, antigen-loaded dendritic cell vaccines can be generated within as little as three (3) days. In another method of the present invention, antigen loaded antigen-presenting cells are produced from monocytes ex vivo by contacting the monocytes with TNF alpha and granulocyte-macrophage colony stimulating factor at one time point to form antigen-presenting cells and then contacting antigenpresenting cells with soluble or particulate antigenic material at a second time point to form antigen loaded antigen-presenting cells, wherein the antigen loaded antigen-presenting cells are produced in less than four days. The present invention also includes a vaccine which comprises monocyte-derived

antigen loaded antigen-presenting cells, wherein the antigenpresenting cells are composed of two or more subsets selected from the group consisting of Langerhans cells with surface markers (CD 1 a+ CD207+); interstitial dendritic cells with surface markers (CD 1a+ CD207-); double negative dendritic cells with surface markers 20 (CD 1 a-CD 14-); and dendritic cells with surface markers (CD 14+ CD 1 a- CD209+).

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